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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,275	12/18/2001	Walter Takeo Yagyu	08200.608	9120

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EXAMINER

FERGUSON, MICHAEL P

ART UNIT PAPER NUMBER

3679

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/020,275

Applicant(s)

YAGYU, WALTER TAKEO

Examiner

Michael P. Ferguson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

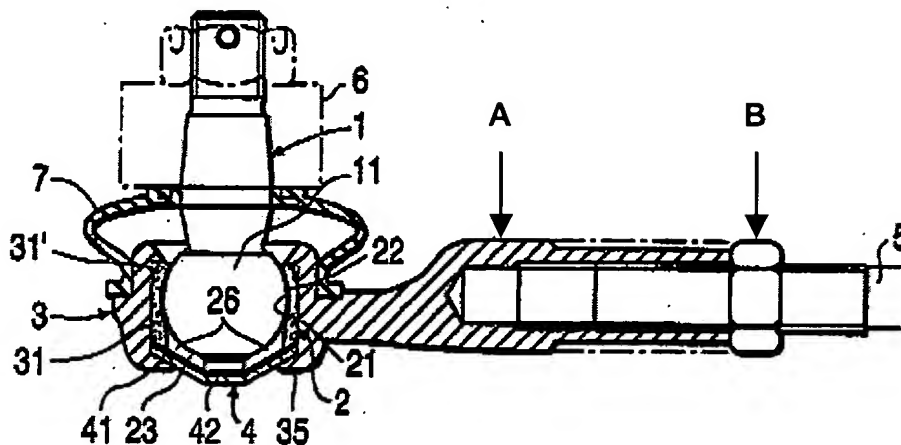
1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al. (US 5,368,408) in view of Pazdirek et al. (US 6,398,446) and Kobayashi (US 5,092,703).

As to claim 1, Shimizu et al. disclose a tie rod comprising a stem 5 provided at its ends with ball joints 3 each composed of a metallic ball joint box A (box A of ball joint 3 has a metallic cross-hatching; Figure 6 reprinted below with annotations), a bearing 2, a protection cover 7 and a ball pin 1, the tie rod having the function of fixing pieces and components of a mechanical system between themselves, providing to them angular and rotational movement, supporting the strains concentrated therein, wherein the stem of the tie rod is combined with components of the metallic ball joint box (Figure 6).

FIG. 6



Shimizu et al. fail to disclose a tie rod wherein a stem of the tie rod is made of material comprising a polymer composite with fiber reinforcement.

Pazdirek et al. teach a tie rod with application of composite with fiber reinforcement, having a stem 22 provided at its ends with ball joints 16 each composed of a composite ball joint box 14, wherein the stem of the tie rod is made of material comprising a metal or a composite and combined with components of the composite ball joint box; the metal and composite materials being interchangeable known alternatives, and the use of metal tie rod components with composite tie rod components being known within the art (Figure 9, column 4 lines 41-46). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a tie rod as disclosed by Shimizu et al. to have a stem made of a composite as taught by Pazdirek et al. as metal and composite materials are interchangeable known alternatives, and the use of metal tie rod components with composite tie rod components is known within the art.

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Kobayashi teaches a tie rod with application of polymer composite with fiber reinforcement, having a stem **1** provided at its ends with ball joints **2** each composed of a ball joint box **5**, wherein the stem of the tie rod is made of material comprising a polymer composite with fiber reinforcement and combined with components of the ball joint box; the fiber reinforced polymer composite being corrosion resistant and providing improved strength and decreased weight at a suitable manufacturing cost (Figures 1-3, column 7 lines 28-44). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a tie rod as disclosed by Shimizu et al. in view of Pazdirek et al. to have a stem made of a polymer composite with fiber reinforcement as taught by Kobayashi in order to provide for a stronger, corrosion resistant, light weight tie rod.

As to claim 2, Shimizu et al. fail to disclose a tie rod wherein ball joints are attached to the ends of a stem by chemical fixing, making the tie rod a tie rod with fixed length.

Pazdirek et al. teach a tie rod wherein ball joints **16** are attached to the ends of a stem **22** by chemical fixing (adhesive), making the tie rod a tie rod with fixed length; the chemical fixing providing for a more secure, permanent connection between the ball joints and the stem (column 4 lines 41-46). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a tie rod as disclosed by Shimizu et al. to have ball joints attached to the ends of a stem by chemical fixing, making the tie rod a tie rod with fixed length as taught by Pazdirek et al.

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in order to provide for a more secure, permanent connection between the ball joints and the stem.

The applicant is reminded that process limitations are given no patentable weight in product claims. See MPEP §.2113. "The patentability of a product does not depend on its method of production. " In re Thorpe, 777 F.2d 695,698,USPQ 964,966 (Fed.Cir.1985).

As to claim 3, Shimizu et al. disclose a tie rod wherein ball joints **3** are attached to the ends of a stem **5** by means of a thread on the body of the stem and in the ball joints' boxes **A**, making the tie rod a tie rod with variable length, the adjustment of its length and the locking of the tie rod being provided by nuts **B** provided on the threads of the stem and that are tightened against the boxes of the ball joints (Figure 6).

Response to Arguments

3. Applicant's arguments filed April 18, 2005 have been fully considered but they are not persuasive.

As to claim 1, Attorney argues that:

Shimizu et al. in view of Pazdirek et al. and Kobayashi does not disclose a tie rod comprising a stem provided at its ends with *ball joints each composed of a metallic ball joint box*, wherein the *stem of the tie rod is made of material comprising a polymer composite*.

Examiner disagrees. As to claim 1, Pazdirek et al. teach a tie rod comprising a stem **22** provided at its ends with ball joints **16** each composed of a composite ball joint box **14**, wherein the stem of the tie rod is made of material comprising a metal or a

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composite and combined with components of the composite ball joint box; the metal and composite materials being interchangeable known alternatives, and the use of metal tie rod components with composite tie rod components being known within the art (Figure 9, column 4 lines 41-46). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a tie rod as disclosed by Shimizu et al. to have a stem made of a composite as taught by Pazdirek et al. as metal and composite materials are interchangeable known alternatives, and the use of metal tie rod components with composite tie rod components is known within the art.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Ferguson whose telephone number is (571)272-7081. The examiner can normally be reached on M-F (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571)272-7087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


MPF
04/26/05



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